Amendments to the claims:

Please amend claims 1, 9 and 17 as shown in the following listing of claims. This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (currently amended) A method of embedding information in images comprising:

detecting first type pixel blocks of an input image, each of said first type pixel blocks including a plurality of pixels, said first type pixel blocks being dependent on pixel values within said first type pixel blocks; and

modulating said first type pixel blocks of said input image based on said information to produce an output image, said output image including said input image and said information.

2. (original) The method of claim 1 wherein said step of detecting said first type pixel blocks of said input image includes detecting minority pixel blocks of said input image, said minority pixel blocks being pixel blocks that include a majority of pixels that contrast with an image background.

3. (original) The method of claim 2 wherein said minority pixel blocks include a majority of dark pixels.

4. (original) The method of claim 2 wherein said minority pixel blocks includes a majority of light pixels.

5. (original) The method of claim 1 further comprising a step of diffusing halftone errors of each pixel block of said input image into neighboring pixel blocks of said input image on a pixel block by pixel block basis.

6. (original) The method of claim 1 wherein said step of modulating said first type pixel blocks of said input image includes replacing said first type pixel blocks of said input image with dot shape blocks such that said information is represented by said dot shape blocks.

7. (original) The method of claim 6 wherein some of said dot shape blocks represents synchronization data.

8. (original) The method of claim 6 wherein some of said dot shape blocks represents binary data.

9. (currently amended) A system for embedding information in images comprising:

a pixel block type detector that is configured to detect first type pixel blocks of an input image, each of said first type pixel blocks including a plurality of pixels, said first type pixel blocks being dependent on pixel values within said first type pixel blocks; and

a block modulator that is configured to modulate said first type pixel blocks of said input image based on said information to be embedded to produce an output image, said output image including said input image and said information.

10. (original) The system of claim 9 wherein said pixel block type detector is configured to detect minority pixel blocks of said input image, said minority pixel blocks being pixel blocks that include a majority of pixels that contrast with an image background.

11. (original) The system of claim 10 wherein said minority pixel blocks include a majority of dark pixels.

12. (original) The system of claim 10 wherein said minority pixel blocks includes a majority of light pixels.

13. (original) The system of claim 9 further comprising an error diffusion halftoner coupled to said block modulator, said error diffusion halftoner being configured to diffuse halftone errors of each pixel block of said input image into neighboring pixel blocks of said input image on a pixel block by pixel block basis.

14. (original) The system of claim 9 wherein said block modulator is configured to replace said first type pixel blocks of said input image with dot shape blocks such that said information is represented by said dot shape blocks.

15. (original) The system of claim 14 wherein some of said dot shape blocks represents synchronization data.

16. (original) The system of claim 14 wherein some of said dot shape blocks represents binary data.

17. (currently amended) A method of embedded information in images comprising:

detecting first type pixel blocks of an input image, each of said first type pixel blocks including a plurality of pixels, said first type pixel blocks being dependent on pixel values within said first type pixel blocks;

modulating said first type pixel blocks of said input image based on said information to produce an output image, said output image including said input image and said information; and

converting pixels of said input image into halftones, including diffusing halftone errors associated with said first type pixel blocks to neighboring pixel blocks of said first type pixel blocks on a block-by-block basis.

18. (original) The method of claim 17 wherein said first type pixel blocks of said input image include minority pixel blocks, said minority pixel blocks being pixel blocks that include a majority of pixels that contrast with an image background.

19. (original) The method of claim 18 wherein said minority pixel blocks include a majority of dark pixels.

20. (original) The method of claim 18 wherein said minority pixel blocks includes a majority of light pixels.

21. (original) The method of claim 17 wherein said step of modulating said first type pixel blocks of said input image includes replacing said first type pixel blocks of said input image with dot shape blocks such that said information is represented by said dot shape blocks.